

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1-9, and 13-24 remain pending in this application; claims 7, 19, 20 and 24 have been amended herein.

In the Office Action of August 30, 2006, the Examiner: (1) rejected claims 7, 15, 19 and 24 under 35 U.S.C. §112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention; (2) rejected claims 1, 6, 8-9, 13-18, and 20-21 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 4,057,535 to Lipatova et al. (hereinafter Lipatova); (3) rejected claims 2-5 under 35 U.S.C. §103(a) as obvious over Lipatova in view of U.S. Patent No. 4,804,691 to English et al. (hereinafter English); (4) rejected claims 7, 9, 22, and 24 under 35 U.S.C. §103(a) as obvious over Lipatova in view of English and further in view of U.S. Patent No. 5,266,323 to Guthrie et al. (hereinafter Guthrie); and (5) rejected claim 23 under 35 U.S.C. §103(a) as obvious over Lipatova in view of English and further in view of U.S. Patent No. 6,339,130 to Bennett et al. (hereinafter Bennett). These rejections are respectfully traversed.

With respect to the rejection of claims 7, 19, and 24 under 35 U.S.C. §112, second paragraph, applicant has amended those claims herein for clarification and respectfully submits these amendments render the rejections moot.

Applicant traverses the rejection of claim 15 as indefinite for the use of the terms “approximating” and “approximated.” As set forth in the specification, “The bioabsorbable compounds and compositions described herein are advantageously useful

is end-capped with an aromatic diisocyanate. Without such disclosure, Lipatova cannot anticipate or render obvious the pending claims including independent claims 1 and 20. As claims 6, 8-9, 13-18, and 21 all depend, directly or indirectly, from claim 1 and incorporate all of its limitations therein, Lipatova similarly cannot anticipate or render obvious those claims.

Thus, the rejection of claims 1, 6, 8-9, 13-18 and 20-21 as anticipated by Lipatova should be withdrawn.

With respect to the rejection of claims 2-5 as obvious over Lipatova in view of English, claims 2-5 depend from claim 1 and incorporate all of its limitations therein. As noted above, there is no teaching or suggestion in Lipatova of a composition including a bioabsorbable oligomeric compound that is end-capped with an aromatic diisocyanate, a trifunctional compound that is end-capped with an aromatic diisocyanate, and an aromatic diisocyanate as recited in claim 1. Without such teaching or suggestion, Lipatova cannot render claim 1 obvious, nor claims 2-5 which depend therefrom.

English fails to remedy the deficiencies of Lipatova. English provides an adhesive formed by reacting a biodegradable monomer with a polyhydroxy polymerization initiator in the presence of a catalyst and preparing a diisocyanate-terminated prepolymer adhesive by reacting the resulting hydroxyl-terminated polyester with excess aromatic diisocyanate. While the prepolymer may be utilized as a single-component or two-component system, nowhere is there any teaching or suggestion in English of a composition including a bioabsorbable oligomeric compound that is end-capped with an aromatic diisocyanate, a trifunctional compound that is end-capped with

as a surgical adhesive or sealant, for example, for joining portions of body tissue together....” (See ¶22 of the application as published, U.S. Patent Publication No. 2006/0111537.)

It is respectfully submitted that the terms “approximating” and “approximated” are commonly used in the fastening art, and that one skilled in the art would understand these terms as utilized in claim 15 to mean bringing two tissue surfaces close together so that they may be joined. In fact, the American Heritage College Dictionary provides as a definition for “approximate” the following: “To bring near or together.” Thus, it is respectfully submitted claim 15 is definite and thus this rejection should be withdrawn.

With respect to the rejection of claims 1, 6, 8-9, 13-18, and 20-21 under 35 U.S.C. §102(b) as anticipated by Lipatova, nowhere does Lipatova disclose or suggest a composition including a bioabsorbable oligomeric compound that is end-capped with an aromatic diisocyanate, a trifunctional compound that is end-capped with an aromatic diisocyanate, and an aromatic diisocyanate as recited in claim 1.

Similarly, nowhere does Lipatova disclose or suggest a method including applying to tissue a composition comprising a bioabsorbable oligomeric compound that is end-capped with an aromatic diisocyanate; a trifunctional compound that is end-capped with an aromatic diisocyanate; and an aromatic diisocyanate; and crosslinking the composition as recited in claim 20.

Rather, Lipatova discloses an adhesive including aromatic diisocyanates, macrodiisocyanates of a defined formula, and 2,4,6-tris(dimethylaminomethyl)phenol. Nowhere in Lipatova is there any teaching or suggestion of a trifunctional compound that

an aromatic diisocyanate, and an aromatic diisocyanate as recited in claim 1. Without such teaching or suggestion, English cannot render claim 1 obvious, nor claims 2-5 which depend from claim 1 and incorporate all of its limitations therein.

With respect to the rejection of claims 7, 19, 22 and 24 as obvious over Lipatova in view of English and further in view of Guthrie, claims 7, 22 and 24 depend directly or indirectly from claim 1 and incorporate all of its limitations therein. As noted above, nowhere does Lipatova disclose or suggest a composition including a bioabsorbable oligomeric compound that is end-capped with an aromatic diisocyanate, a trifunctional compound that is end-capped with an aromatic diisocyanate, and an aromatic diisocyanate as recited in claim 1.

Similarly, nowhere does Lipatova disclose or suggest a composition including a bioabsorbable oligomeric compound that is end-capped with an aromatic diisocyanate, wherein the bioabsorbable oligomeric compound has the structure:



wherein A is a bioabsorbable group derived from a monomer selected from the group consisting of glycolic acid, glycolide, lactic acid, lactide, 1,4-dioxane-2-one, 1,3-dioxane-2-one and ϵ -caprolactone, n is from about 1 to about 6 and X is a residue from a multifunctional initiator selected from the group consisting of ethylene glycol, diethylene glycol, 1,3-propanediol, 1,4-butanediol, 1,5-pentanediol, 1,6-hexanediol, 1,7-heptanediol, 1,8-octanediol, 1,10-decanediol, 1,12-dodecanediol, 1,2-decanediol, 1,2-dodecanediol, 1,2-hexadecanediol, 3-methyl-1,5-pentanediol, 2-methyl-1,3-propanediol, 2-butyl-2-ethyl-1,3-propanediol, 2-ethyl-3-butyl-1,3-propanediol, 2-ethyl-1,6-hexanediol, glycerol,

1,1,1-trimethylolpropane, neopentyl glycol, pentaerythritol, triethanolamine, 1-aminopropanols, 2-aminopropanols, 2-aminobutanols, 4-aminobutanols, succinic acid, glutaric acid, adipic acid, suberic acid, sebacic acid, dodecanedioic acid, 2-ethyl-2-methylsuccinic acid, phthalic acid, isophthalic acid, and terephthalic acid; a trifunctional compound that is end-capped with an aromatic diisocyanate, wherein the trifunctional compound is selected from the group consisting of glycerol, 1,1,1-trimethylolpropane, triethanolamine, 1-aminopropanols, 2-aminopropanols, 2-aminobutanols, and 4-aminobutanols; and an aromatic diisocyanate selected from the group consisting of 1,4-diisocyanatobenzene, 1,1'-methylenebis[4-isocyanatobenzene], 2,4-diisocyanato-1-methylbenzene, 1,3-diisocyanato-2-methylbenzene, 1,5-diisocyanatonaphthalene, 1,1'-(1-methylethylidene)bis[4-isocyanatobenzene] and 1,3- and 1,4-bis(1-isocyanato-1-methylethyl)benzene, as recited in claim 19.

Nowhere in Lipatova is there any teaching or suggestion of a trifunctional compound that is end-capped with an aromatic diisocyanate. Without such disclosure, Lipatova cannot anticipate nor render obvious the pending claims, including independent claims 1 and 19, or any claim dependent, directly or indirectly, therefrom, including claims 7, 22 and/or 24.

English fails to remedy the deficiencies of Lipatova. As noted above, while English provides an adhesive formed by reacting a biodegradable monomer with a polyhydroxy polymerization initiator in the presence of a catalyst and preparing a diisocyanate-terminated prepolymer adhesive by reacting the resulting hydroxyl-terminated polyester with excess aromatic diisocyanate, nowhere is there any teaching or

suggestion in English of a composition including a bioabsorbable oligomeric compound that is end-capped with an aromatic diisocyanate, a trifunctional compound that is end-capped with an aromatic diisocyanate, and an aromatic diisocyanate as recited in claim 1.

Similarly, nowhere is there any teaching or suggestion in English of a composition including a bioabsorbable oligomeric compound that is end-capped with an aromatic diisocyanate, wherein the bioabsorbable oligomeric compound has the structure:



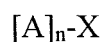
wherein A is a bioabsorbable group derived from a monomer selected from the group consisting of glycolic acid, glycolide, lactic acid, lactide, 1,4-dioxane-2-one, 1,3-dioxane-2-one and ϵ -caprolactone, n is from about 1 to about 6 and X is a residue from a multifunctional initiator selected from the group consisting of ethylene glycol, diethylene glycol, 1,3-propanediol, 1,4-butanediol, 1,5-pentanediol, 1,6-hexanediol, 1,7-heptanediol, 1,8-octanediol, 1,10-decanediol, 1,12-dodecanediol, 1,2-decanediol, 1,2-dodecanediol, 1,2-hexadecanediol, 3-methyl-1,5-pentanediol, 2-methyl-1,3-propanediol, 2-butyl-2-ethyl-1,3-propanediol, 2-ethyl-3-butyl-1,3-propanediol, 2-ethyl-1,6-hexanediol, glycerol, 1,1,1-trimethylolpropane, neopentyl glycol, pentaerythritol, triethanolamine, 1-aminopropanols, 2-aminopropanols, 2-aminobutanols, 4-aminobutanols, succinic acid, glutaric acid, adipic acid, suberic acid, sebacic acid, dodecanedioic acid, 2-ethyl-2-methylsuccinic acid, phthalic acid, isophthalic acid, and terephthalic acid; a trifunctional compound that is end-capped with an aromatic diisocyanate, wherein the trifunctional compound is selected from the group consisting of glycerol, 1,1,1-trimethylolpropane, triethanolamine, 1-aminopropanols, 2-aminopropanols, 2-aminobutanols, and 4-

aminobutanols; and an aromatic diisocyanate selected from the group consisting of 1,4-diisocyanatobenzene, 1,1'-methylenebis[4-isocyanatobenzene], 2,4-diisocyanato-1-methylbenzene, 1,3-diisocyanato-2-methylbenzene, 1,5-diisocyanatonaphthalene, 1,1'-(1-methylethylidene)bis[4-isocyanatobenzene] and 1,3- and 1,4-bis(1-isocyanato-1-methylethyl)benzene, as recited in claim 19.

Thus, neither English nor Lipatova, taken alone or in any combination, render obvious claims 1 and 19, or claims dependent therefrom, including claims 7, 22 and 24.

Guthrie fails to remedy the deficiencies of Lipatova and English, no matter how these references may be combined. Nowhere is there any teaching or suggestion in Guthrie of a composition including a bioabsorbable oligomeric compound that is end-capped with an aromatic diisocyanate, a trifunctional compound that is end-capped with an aromatic diisocyanate, and an aromatic diisocyanate as recited in claim 1.

Similarly, nowhere is there any teaching or suggestion in Guthrie of a composition including a bioabsorbable oligomeric compound that is end-capped with an aromatic diisocyanate, wherein the bioabsorbable oligomeric compound has the structure:



wherein A is a bioabsorbable group derived from a monomer selected from the group consisting of glycolic acid, glycolide, lactic acid, lactide, 1,4-dioxane-2-one, 1,3-dioxane-2-one and ϵ -caprolactone, n is from about 1 to about 6 and X is a residue from a multifunctional initiator selected from the group consisting of ethylene glycol, diethylene glycol, 1,3-propanediol, 1,4-butanediol, 1,5-pentanediol, 1,6-hexanediol, 1,7-heptanediol, 1,8-octanediol, 1,10-decanediol, 1,12-dodecanediol, 1,2-decanediol, 1,2-dodecanediol,

1,2-hexadecanediol, 3-methyl-1,5-pentanediol, 2-methyl-1,3-propanediol, 2-butyl-2-ethyl-1,3-propanediol, 2-ethyl-3-butyl-1,3-propanediol, 2-ethyl-1,6-hexanediol, glycerol, 1,1,1-trimethylolpropane, neopentyl glycol, pentaerythritol, triethanolamine, 1-aminopropanols, 2-aminopropanols, 2-aminobutanols, 4-aminobutanols, succinic acid, glutaric acid, adipic acid, suberic acid, sebacic acid, dodecanedioic acid, 2-ethyl-2-methylsuccinic acid, phthalic acid, isophthalic acid, and terephthalic acid; a trifunctional compound that is end-capped with an aromatic diisocyanate, wherein the trifunctional compound is selected from the group consisting of glycerol, 1,1,1-trimethylolpropane, triethanolamine, 1-aminopropanols, 2-aminopropanols, 2-aminobutanols, and 4-aminobutanols; and an aromatic diisocyanate selected from the group consisting of 1,4-diisocyanatobenzene, 1,1'-methylenebis[4-isocyanatobenzene], 2,4-diisocyanato-1-methylbenzene, 1,3-diisocyanato-2-methylbenzene, 1,5-diisocyanatonaphthalene, 1,1'-(1-methylethylidene)bis[4-isocyanatobenzene] and 1,3- and 1,4-bis(1-isocyanato-1-methylethyl)benzene as recited in claim 19.

Guthrie discloses degradable articles including polyurethane polymer gels or foams possessing hydrolytically unstable ester linkages which may be utilized as bait. While Guthrie describes polyols or polyol blends which may be capped with polyisocyanates to form liquid prepolymers, nowhere is there any teaching or suggestion in Guthrie of a composition including a bioabsorbable oligomeric compound that is end-capped with an aromatic diisocyanate, a trifunctional compound that is end-capped with an aromatic diisocyanate, and an aromatic diisocyanate. Without such teaching or suggestion, neither Lipatova, English nor Guthrie, taken alone or in any combination,

render obvious claims 1 and 19, or claims dependent therefrom, including claims 7, 22 and 24.

Finally, with respect to the rejection of claim 23 as obvious over Lipatova in view of English and further in view of Bennett, claim 23 depends indirectly from claim 1 and incorporates all of its limitations therein. As described above in great detail, neither Lipatova nor English render claim 1 obvious. Bennett fails to remedy the deficiencies of Lipatova and English, no matter how these references may be combined.

As Bennett does not disclose a composition including a bioabsorbable oligomeric compound that is end-capped with an aromatic diisocyanate, a trifunctional compound that is end-capped with an aromatic diisocyanate, and an aromatic diisocyanate as recited in claim 1, it cannot render obvious the pending claims.

Thus, it is respectfully submitted that claim 23 is patentable over Lipatova, English, and Bennett, no matter how these references may be combined.

It is believed that the claims of the application as now presented, i.e., claims 1-9, and 13-24, are patentably distinct over the art of record and are in condition for allowance. In the event that the Examiner believes that a telephone conference or a personal interview may facilitate resolution of any remaining matters, the undersigned may be contacted at the number indicated below. Early and favorable reconsideration of this application is respectfully requested.

Respectfully submitted,

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